MAJOR SOURCE OPERATING PERMIT

Permitee: **Tenaska Alabama Partners, L.P.**

Facility Name: **Tenaska Lindsay Hill Generating Station**

Facility No.: 201-0008

Location: Billingsley, Autauga County, Alabama

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol. and 2007 Cum. Supp.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

Issuance Date: *Draft*

Effective Date: *Draft*

Expiration Date: *Draft*

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1. Transfer	
This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5.	Rule 335-3-16-.02(6)
2. Renewals	
An application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of this permit.	Rule 335-3-16-.12(2)
The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph.	
3. Severability Clause	
The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered.	Rule 335-3-16-.05(e)
4. Compliance	
(a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.	Rule 335-3-16-.05(f)
(b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.	Rule 335-3-16-.05(g)

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5. Termination for Cause	
This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.	Rule 335-3-16-.05(h)
6. Property Rights	
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.	Rule 335-3-16-.05(i)
7. Submission of Information	
The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.	Rule 335-3-16-.05(j)
8. Economic Incentives, Marketable Permits, and Emissions Trading	
No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.	Rule 335-3-16-.05(k)
9. Certification of Truth, Accuracy, and Completeness:	
Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.	Rule 335-3-16-.07(a)
10. Inspection and Entry	
Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized	Rule 335-3-16-.07(b)

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representatives of the Alabama Department of Environmental Management and EPA to conduct the following: (a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit; (b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit; (c) Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit; (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.	
11. <u>Compliance Provisions</u> (a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance. (b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.	Rule 335-3-16-.07(c)
12. <u>Compliance Certification</u> A compliance certification shall be submittedyearly no later than two months from the anniversary date of the permit's issuance unless more frequent periods are specified according to the specific rule governing the source or required by the Department. The compliance certification shall cover the reporting period of XXXXX throught XXXXX of each year.. (a) The compliance certification shall include the following: (1) The identification of each term or condition of this permit that is the basis of the certification;	Rule 335-3-16-.07(e)

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(2) The compliance status; (3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements); (4) Whether compliance has been continuous or intermittent; (5) Such other facts as the Department may require to determine the compliance status of the source; (b) The compliance certification shall be submitted to: Alabama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463 and to: Air and EPCRA Enforcement Branch EPA Region IV 61 Forsyth Street, SW Atlanta, GA 30303	
13. <u>Reopening for Cause</u> Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit: (a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire. (b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans	Rule 335-3-16-.13(5)

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shall be deemed to be incorporated into this permit. (c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (d) The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.	
14. <u>Additional Rules and Regulations</u> This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.	§22-28-16(d), Code of Alabama 1975, as amended
15. <u>Equipment Maintenance or Breakdown</u> (a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following: (1) Identification of the specific facility to be taken out of service as well as its location and permit number; (2) The expected length of time that the air pollution control equipment will be out of service; (3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period; (4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period;	Rule 335-3-1-.07(1), (2)

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(5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.	
(b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected.	
16. Operation of Capture and Control Devices	
All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.	§22-28-16(d), Code of Alabama 1975, as amended
17. Obnoxious Odors	
This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.	Rule 335-3-1-.08
18. Fugitive Dust	
(a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.	Rule 335-3-4-.02
(b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:	

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(1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic; (2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are created; (3) By paving; (4) By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions; Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.	
19. <u>Additions and Revisions</u> Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-.14.	Rule 335-3-16-.13 and .14
20. <u>Recordkeeping Requirements</u> (a) Records of required monitoring information of the source shall include the following: (1) The date, place, and time of all sampling or measurements; (2) The date analyses were performed; (3) The company or entity that performed the analyses; (4) The analytical techniques or methods used; (5) The results of all analyses; and (6) The operating conditions that existed at the time of sampling or measurement.	Rule 335-3-16-.05(c)2.

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(b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit	
21. <u>Reporting Requirements</u>	
(a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9).	Rule 335-3-16-.05(c)3.
(b) Deviations from permit requirements shall be reported within 48 hours or 2 working day of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken.	
22. <u>Emission Testing Requirements</u>	
Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.	Rule 335-3-1-.05(3) and Rule 335-3-1-.04(1)
The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.	
To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:	
(1) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that	Rule 335-3-1-.04

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will conduct the tests. (2) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures require probe cleaning). (3) A description of the process(es) to be tested including the feed rate, any operating parameters used to control or influence the operations, and the rated capacity. (4) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.	
A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis. All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.	Rule 335-3-1-.04
23. <u>Payment of Emission Fees</u>	
Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code r. 335-1-7-.04.	Rule 335-1-7-.04
24. <u>Other Reporting and Testing Requirements</u>	
Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time.	Rule 335-3-1-.04(1)
25. <u>Title VI Requirements (Refrigerants)</u>	
Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR Part 82, Subpart A, Appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part	40 CFR Part 82

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82, Subpart F. No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR Part 82, Subpart F. The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the US EPA and the Department as required.	
26. <u>Chemical Accidental Prevention Provisions</u> If a chemical listed in Table 1 of 40 CFR 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then: (a) The owner or operator shall comply with the provisions in 40 CFR Part 68. (b) The owner or operator shall submit one of the following: (1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a) or, (2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan.	40 CFR Part 68
27. <u>Display of Permit</u> This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it.	Rule 335-3-14-.01(1)(d)
28. <u>Circumvention</u> No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.	Rule 335-3-1-.10

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29. Visible Emissions	
Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit.	Rule 335-3-4-.01(1)
30. Fuel-Burning Equipment	
(a) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Rule 335-3-4-.03.	Rule 335-3-4-.03 Rule 335-3-5-.01
(b) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Rule 335-3-5-.01.	
31. Process Industries – General	
Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Rule 335-3-4-.04.	Rule 335-3-4-.04
32. Averaging Time for Emission Limits	
Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.	Rule 335-3-1-.05
33. Emissions Inventory Reporting Requirements	
In order to meet the statewide emissions inventory reporting requirements under 40 CFR 51, Appendix A, the permittee shall comply with the reporting requirements under ADEM Admin. Code r. 335-3-1-.15.	Rule 335-3-1-.15

Summary Page for Three (3) 163/164 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)

Permitted Operating Schedule: 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	PM	CT & DB (Natural Gas Firing) – 0.020 lb/MMBtu & 31.9 lb/hr CT & DB (Fuel Oil Firing) – 0.042 lb/MMBtu & 66.1 lb/hr	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	NOx	CT – 109 ppmv (Natural Gas) 102 ppmv (Fuel Oil) (4-hr rolling avg) DB – 1.6 lb/MWh (30-day rolling avg) CT & DB (Natural Gas Firing) – 0.0145 lb/MMBtu & 34.9 lb/hr (3-hr rolling avg) CT & DB (Fuel Oil Firing) – 0.050 lb/MMBtu & 113.4 lb/hr (3-hr rolling avg)	40 CFR 60 Subpart GG 40 CFR §60.332(a)(1), §60.334(j)(1)(iii)(A) 40 CFR 60 Subpart Da 40 CFR §60.44Da(d)(1) ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	SO_2	CT – 150 ppmvd or Sulfur content of fuels ≤ 0.8% DB – 0.20 lb/MMBtu CT & DB (Natural Gas Firing – 0.014 lb/MMBtu & 33.2 lb/hr CT & DB (Fuel Oil Firing) – 0.052 lb/MMBtu & 110.4 lb/hr Sulfur content of fuels fired in CTs ≤ 0.05% by weight	40 CFR 60 Subpart GG 40 CFR §60.333 40 CFR 60 Subpart Da 40 CFR §60.43Da(b)(2) ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	CO	CT & DB (Natural Gas Firing) – 0.045 lb/MMBtu & 106.0 lb/hr (3-hr rolling avg) CT & DB (Fuel Oil Firing) – 0.062 lb/MMBtu & 150.5 lb/hr (3-hr rolling avg)	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT

Summary Page for Three (3) 163/164 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)

Permitted Operating Schedule: 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	VOC	CT & DB (Natural Gas Firing) – 0.007 lb/MMBtu & 16.2 lb/hr CT & DB (Fuel Oil Firing) – 0.012 lb/MMBtu & 27.3 lb/hr	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	Sulfuric Acid Mist	CT & DB (Natural Gas Firing) – 0.0011 lb/MMBtu & 2.55 lb/hr CT & DB (Fuel Oil Firing) – 0.004 lb/MMBtu & 8.60 lb/hr	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT
001A 001B 001C	Three (3) 170 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)	Opacity	10%	ADEM Admin. Code r. 335-3-14-.04(9)(b) BACT

Provisos for Three (3) 163/164 MW Natural Gas/Distillate Oil Fired Combustion Turbines each w/ a 550 MMBtu/hr Natural Gas Fired Duct Burner and Heat Recovery Steam Generator w/ Selective Catalytic Reduction (SCR)

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Applicability	
1. These units are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16, "Major Source Operating Permits".	Rule 335-3-16
2. These units are subject to the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]".	Rule 335-3-14-.04
3. The three (3) duct burners are subject to the NSPS regulations for Electric Utility Steam Generating Units, Subpart Da of 40 CFR Part 60.	Rule 335-3-10-.02(2)(a) 40 CFR §60.40Da(a)
4. The three (3) combustion turbines are subject to the NSPS regulations for Stationary Gas Turbines, Subpart GG of 40 CFR Part 60.	Rule 335-3-10-.02(33) 40 CFR §60.330(a)-(b)
5. The turbines and duct burners are subject to the applicable requirements of Subpart A, the General Provision of 40 CFR Part 60.	Rule 335-3-10-.02(1)
6. These units are subject to the Acid Rain Rules contained in Rule 335-3-18 and 40 CFR Part 72, 73, and 75. The applicable Acid Rain Permit is contained in the Acid Rain portion of this Operating Permit.	Rule 335-3-18 40 CFR Parts 72, 73, and 75
7. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated as enforceable conditions of this permit.	Rule 335-3-16-.05(a)2
8. These sources are subject to the applicable provisions of the Cross-State Air Pollution Rule found in ADEM Admin. Code r. 335-3-5-.06 through 335-3-5-.36 and ADEM Admin. Code r. 335-3-8-.07 through 335-3-8-.70.	Rules 335-3-5-.06 through 335-3-5-.36 and Rules 335-3-8-.07 through 335-3-8-.70
Emission Standards	

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1. The nitrogen oxide emission rate from each combined turbine/duct burner stack shall not exceed 0.0145 lb/MMBtu and 34.9 lb/hr when firing natural gas and 0.050 lb/MMBtu and 113.4 lb/hr when firing distillate oil (each limit based upon a 3 hour rolling average as determined by CEMS).	
2. The carbon monoxide emission rate from each combined turbine/duct burner stack shall not exceed 0.045 lb/MMBtu and 106.0 lb/hr when firing natural gas and 0.062 lb/MMBtu and 150.5 lb/hr when firing distillate oil.	Rule 335-3-14-.04(9)(b) (BACT)
3. The volatile organic compound emission rate from each combined turbine/duct burner stack shall not exceed 0.007 lb/MMBtu and 16.2 lb/hr when firing natural gas and 0.012 lb/MMBtu and 27.3 lb/hr when firing distillate oil.	Rule 335-3-14-.04(9)(b) (BACT)
4. The particulate matter emission rate from each combined turbine/duct burner stack shall not exceed 0.020 lb/MMBtu and 31.9 lb/hr when firing natural gas and 0.042 lb/MM Btu and 66.1 lb/hr when firing distillate oil.	Rule 335-3-14-.04(9)(b) (BACT)
5. The sulfur dioxide emission rate from each combined turbine/duct burner stack shall not exceed 0.014 lb/MM Btu and 33.2 lb/hr when firing natural gas and 0.052 lb/MM Btu and 110.4 lb/hr when firing distillate oil.	Rule 335-3-14-.04(9)(b) (BACT)
6. The sulfuric acid mist emission rate from each combined turbine/duct burner stack shall not exceed 0.0011 lb/MMBtu and 2.55 lb/hr when firing natural gas and 0.004 lb/MMBtu and 8.60 lb/hr when firing distillate oil.	Rule 335-3-14-.04(9)(b) (BACT)
7. Visible emission from each combined turbine and duct burner stack shall not exceed 10% opacity.	Rule 335-3-14-.04(9)(b) (BACT)
8. Each turbine shall only fire natural gas or distillate oil. The sulfur content of the distillate oil fired shall not exceed 0.05% by weight. The duct burners shall only fire natural gas.	Rule 335-3-14-.04(9)(b) (BACT)
9. Nitrogen Oxides emissions from the combustion turbines shall not exceed 109 ppmv while firing natural gas and 102 ppmv while firing fuel oil (based upon a rolling 4 hour average).	Rule 335-3-10-.02(33) 40 CFR §60.332(a)(1), §60.334(j)(1)(iii)(A)
10. Nitrogen Oxides emissions from the duct burners shall not exceed 1.6 lb/MWh (based upon a 30 day rolling average).	Rule 335-3-10-.02(2)(a) 40 CFR §60.44Da(d)(1)
11. Sulfur dioxide emissions from the combustion turbines shall not exceed 150 ppm or the sulfur content of all fuels burned in the combustion turbines shall not exceed 0.8% by weight.	Rule 335-3-10-.02(33) 40 CFR §60.333

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12. Sulfur dioxide emissions from the duct burners shall not exceed 0.2 lb/MMBtu.	Rule 335-3-10-.02(2)(a) 40 CFR §60.43Da(b)(2)
13. The emission standards in Items 1 through 7 apply at all times except during startup, shutdown, and load change as defined below, and during turbine fuel transfer from natural gas to distillate fuel oil or from distillate fuel oil to natural gas. Startup: The period from when the combustion turbine is started until it reaches the operational load last approved by the Department. This period shall be readily identifiable on the load chart recording. Shutdown: The period from when the combustion turbine is shutting down from the operational load last approved by the Department to 0% load. This period shall be readily identifiable on the load chart recording. Load Change: A rapid change in the electrical loading of a unit that is readily identifiable on a load chart recording.	Rule 335-3-14-.03(1)(h)1
14. The three (3) combustion turbines shall burn no more than a total of 31,500,000 gallons of distillate oil in any consecutive 12-month period.	Rule 335-3-14-.04(9) (BACT)
15. The three (3) heat recovery steam generator duct burners shall combust no more than a total of 10,512,000 MMBTU of natural gas in any consecutive 12-month period.	Rule 335-3-14-.04(9) (BACT)
16. Emissions exceeding any allowances that the source lawfully holds under Title IV of the Act or the regulations promulgated thereunder are prohibited.	Rule 335-3-16-.05(d)
17. Each turbine may operate at the lowest load for which the turbine has been verified by compliance tests or continuous emission monitoring to meet the emission standards for carbon monoxide, nitrogen oxides and volatile organic compounds, provided that the owner or operator has completed ambient air modeling using the stack parameters at that load that confirms that all ambient air standards would be met. The Department must approve in writing of any change to the lowest load of a turbine prior to operating at such load.	Rule 335-3-14-.04(10) (BACT)
<u>Compliance and Performance Test Methods and Procedures</u>	

Federally Enforceable Provisos	Regulations
1. The continuous emissions monitor system (CEMS) required by Proviso 1 of the Emissions Monitoring section shall be used to determine compliance with the applicable nitrogen oxide limits. Method 20 of Appendix A in 40 CFR Part 60 may also be used to determine compliance with the nitrogen oxides and oxygen concentrations.	Rule 335-3-1-.05
2. The owner or operator shall determine compliance with the fuel sulfur content limits as follows: ASTM D 1072-80 or 90 (Reapproved 1994), D 2880-71, D 3031-81, D 4084-82 or 94, or D 3246-81, 92, or 96 shall be used for the sulfur content of gaseous fuels. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
3. Method 9 of Appendix A in 40 CFR Part 60 shall be used to determine the opacity from the combined turbine and duct burner stacks.	Rule 335-3-1-.05
4. Method 10 of Appendix A in 40 CFR Part 60 shall be used to determine compliance with the applicable carbon monoxide emissions limits. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
5. Method 5 or 17 of Appendix A in 40 CFR Part 60 shall be used to determine compliance with the applicable particulate matter emissions limits. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05
6. Method 25, 25A, or 25B of Appendix A in 40 CFR Part 60 shall be used to determine compliance with the applicable volatile organic compounds emissions limits. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05(1)
7. Method 6, 6A, or 6B of Appendix A in 40 CFR Part 60 shall be used to determine compliance with the applicable sulfur dioxide emissions limits. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05(1)
8. Method 8 of Appendix A in 40 CFR Part 60 shall be used to determine compliance with the applicable sulfuric acid mist emissions limits. Alternate methods may be utilized if approved in advance by the Department.	Rule 335-3-1-.05(1)
9. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the	Rule 335-3-1-.05(1)

Federally Enforceable Provisos	Regulations
Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.	
Emission Monitoring	
1. The continuous emissions monitoring system (CEMS) to measure nitrogen oxide emissions shall continue to be operated at a location approved by the Director. The CEMS shall meet the specifications and procedures of 40 CFR Part 75 and will be certified and maintained in accordance with 40 CFR Part 75. The NOx CEMS shall be utilized as a continuous compliance determination method for each of the applicable NOx limits based upon the specified averaging times.	Rule 335-3-14-.04(9)(b) 40 CFR Part 75
2. A carbon monoxide continuous emission monitoring system (CEMS) shall continue to be utilized as an indicator of compliance with the CO and VOC emission limitations. CO emissions, as indicated by the CO CEMS, shall be no greater than the permitted limits, based upon rolling 3 hour periods. The CO CEMS shall meet the specifications and procedures of 40 CFR Part 60.	Rule 335-3-16-.05(c)
3. Oil sampling and analysis should be performed in accordance with 40 CFR Part 75, Appendix D.	40 CFR Part 75
Recordkeeping and Reporting Requirements	
1. An excess emissions report for the combined turbine/duct burner stack as defined by 40 CFR Part 60, Subpart A, §60.7(c) and (d), shall be submitted semi-annually to the Department within 30 days of the end of each reporting period in the following format: NO_x and CO: (A) Source Operating Time (all times and periods in hours) (B) Time Monitoring System was Able to Record Source Performance* (C) Monitor Availability (%) = B/A x 100 (D) Total Emissions Periods where the Monitoring System determines emissions are above standards**	Rule 335-3-16-.05(c) 40 CFR §60.7(c) and (d)

Federally Enforceable Provisos	Regulations

(E) Overall Source Performance (%) = [(B - D) / B] x 100

(F) Exempt Periods (as applicable)- F (x)

(1) F_1 = Startup/Shutdown

(2) F_2 = Load Change

(G) Net Excess Emissions - G = D - ΣF(x)

(H) Net Source Performance (%) - H:

= [1 - (G/(B-ΣF(x)))] x 100

= [(B – ΣF(x) - G) / (B - ΣF(x))] x 100

(I) Overall Exceedances (%) - Percent of time above the standard due to all reasons:

= 100-E

(J) Net Exceedances (%) - Percent of time above the standard due to non-exempt reasons:

= 100-H

(K) Exempt Period Exceedances (%) - Percent of time above the standard due to an exempted reason

SU/SD = (F_1 / B) x 100

Load Change = (F_2 / B) x 100

* Information identifying each period during which the monitoring systems were inoperative (except for zero and span checks) and the nature of the system repairs or adjustments will be maintained and made available upon request.

** Report date, time, duration, magnitude, cause and corrective action taken for each occurrence. Standards include 40 CFR Part 60 and BACT limits.

NOTE: Data recorded during periods of system breakdowns, repairs, adjustments, and calibration checks shall not be included in any of the above data averages.

NOTE: Equations used to convert Monitoring System data as monitored to the required reporting standard will be provided with the first report of each calendar year.

Federally Enforceable Provisos	Regulations
2. Records of the following shall be maintained in a form suitable for inspection for a period of at least five years following the said recording: (a) The sulfur content, by weight, of the fuel burned in the combustion turbines. (b) The monthly and rolling 12 month totals of the quantity of fuel oil fired in each combustion turbine and the rolling 12 month totals of the quantity of fuel oil fired in all combustion turbines. (c) The monthly and rolling 12 month totals of the quantity of natural gas fired in each duct burner and the rolling 12 month totals of the quantity of natural gas fired in all duct burners.	Rule 335-3-14-.04(9)(b)
3. The facility shall comply with the recordkeeping and reporting requirements of Rules 335-3-5-.31, 335-3-5-.35, 335-3-8-.33, 335-3-8-.37, 335-3-8-.65 and 335-3-8-.69.	Rules 335-3-5-.31, 335-3-5-.35, 335-3-8-.33, 335-3-8-.37, 335-3-8-.65 and 335-3-8-.69
<u>Acid Rain Requirements</u>	
1. These units are subject to the Acid Rain Rules contained in Rule 335-3-18 and 40 CFR Part 72, 73, and 75. Applicable Acid Rain Permit requirements are contained in the attached Acid Rain portion of this Operating Permit.	Rule 335-3-18 40 CFR Parts 72, 73, and 75.
<u>CSAPR Requirements</u>	
1. These units are subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the SO_2 Group 2 Trading Program requirements.	Rules 335-3-5-.06 through 335-3-5-.36
2. These units are subject to the applicable provisions of Cross-State Air Pollution Rule (CSAPR) to include all applicable provisions of the NOx Annual and NOx Ozone Season Trading Programs requirements.	Rules 335-3-8-.07 through 335-3-8-.70

Summary Page for MACT Subpart ZZZZ – Existing Emergency Firewater Pump Engine

Permitted Operating Schedule*: 24 Hrs/day x 7 Days/week x 52 Weeks/yr = 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
002	412 HP Existing Diesel Fired Firewater Pump Engine	PM	N/A	N/A
002	412 HP Existing Diesel Fired Firewater Pump Engine	SO_2	N/A	N/A
002	412 HP Existing Diesel Fired Firewater Pump Engine	NO_X	N/A	N/A
002	412 HP Existing Diesel Fired Firewater Pump Engine	CO	N/A	N/A
002	412 HP Existing Diesel Fired Firewater Pump Engine	VOC	N/A	N/A
002	412 HP Existing Diesel Fired Firewater Pump Engine	Opacity	See General Provisos	Rule 335-3-4-.01(1)

*Operating hours limited to 100 hrs/yr in non-emergency situations

Provisos for MACT Subpart ZZZZ – Existing Emergency Firewater Pump Engine

Federally Enforceable Provisos	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, "Major Source Operating Permits".	Rule 335-3-16-.03
2. This source is subject to the applicable requirements of 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE)".	40 CFR §63.6585 Subpart ZZZZ
3. This source is subject to the applicable requirements of Subpart A of 40 CFR Part 63, "General Provisions" as listed in Table 8 of Subpart ZZZZ.	40 CFR §63.6665 Subpart ZZZZ
Emission Standards	
1. This source is subject to the applicable requirements listed in Table 2d of 40 CFR 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.	40 CFR §63.6603
2. The Permittee must operate and maintain this unit according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	40 CFR §63.6625(e)(3)
3. The firewater pump shall be equipped with a non-resettable hour meter.	40 CFR §63.6625(f)
4. This unit may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of these units are limited to 100 hours per year. There is no time limit on the use of these units in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year . This unit may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for	40 CFR §63.6640(f)

Federally Enforceable Provisos	Regulations
maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in 40 CFR 63 Subpart ZZZZ, is prohibited.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR (Latest Edition) Part 60, Appendix A shall be used in the determination of the opacity.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall perform the following activities: (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. Or utilize an oil analysis program as described in §63.6625(i).	40 CFR Part 63 Subpart ZZZZ Table 2d §63.6625(i)
2. If an oil analysis program is utilized for a stationary compression ignition engine, the Permittee must perform the oil analysis at the same frequency specified above for changing the oil. The Permittee must at a minimum analyze the following parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new, viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new, or percent water content (by volume) is greater than 0.5. If any of the limits are exceed, the Permittee must change the oil within 2 business days of receiving the results of the analysis or before commencing operation, whichever is later.	40 CFR Subpart ZZZZ §63.6625(i)
Recordkeeping and Reporting Requirements	
1. The Permittee must keep records of the parameters that are analyzed as part of the oil analysis program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for	40 CFR Subpart ZZZZ §63.6625(i)

Federally Enforceable Provisos		Regulations
	the engine.	
2.	The Permittee must keep records of the maintenance conducted on this unit in order to demonstrate that you operated and maintained this unit and after-treatment control device (if any) according to your own maintenance plan or according to manufacturer's written instructions.	40 CFR §63.6655(e)
3.	The Permittee must keep records of the hours of operation of each engine that is recorded through the non-resettable hour meter. The facility must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.	40 CFR §63.6655(f)

Phase II Acid Rain Permit

Issued by: Alabama Department of Environmental Management
Issued to: Tenaska Lindsay Hill Generating Station
Operated by: Tenaska Alabama Partners, L.P.
ORIS Code: 55271
Effective: XXXX XX, 2021 through XXXX XX, 2025

Acid Rain Permit Contents

1) Statement of Basis

2) SO_2 allowances allocated under this permit and NO_x requirements for each affected unit.

3) Comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process and any additional requirements or conditions.

4) The Phase II Permit Application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Permit Application.

5) Summary of Previous Actions and Current Action.

1) Statement of Basis:

Statutory and Regulatory Authorities: In accordance with the Code of Alabama 1975, §§ 22-22A-4, 22-22A-6, 22-22A-8, 22-28-14, and Titles IV and V of the Clean Air Act, the Alabama Department of Environmental Management issues this permit pursuant to ADEM Admin. Codes 335-3-16 and 335-3-18.

2) SO_2 Allowance Allocations and NO_x Requirements for each affected unit:

		2021	2022	2023	2024	2025
CT1	SO_2 allowances, under 40 CFR part 73 [tons]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
	NO_x limit [lb/MMBtu]	¤2	¤2	¤2	¤2	¤2

		2021	2022	2023	2024	2025
CT2	SO_2 allowances, under 40 CFR part 73 [tons]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
	NO_x limit [lb/MMBtu]	¤2	¤2	¤2	¤2	¤2

		2021	2022	2023	2024	2025
CT3	SO_2 allowances, under 40 CFR part 73 [tons]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
	NO_x limit [lb/MMBtu]	¤2	¤2	¤2	¤2	¤2

1 The number of allowances allocated to Phase II affected units by U.S. EPA may change under 40 CFR Part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to SO_2 allowance allocations identified in this permit [See 40 CFR 72.84].

2 40 CFR Part 76 does not establish a NOx emission rate for Combined Cycle Combustion Turbine Units CT1, CT2, and CT3.

3) Comments, Notes, and Justifications: This facility consists of three combined cycle 163/164 MW Natural Gas/Distillate Oil Fired Combustion Turbines each with a Natural Gas Fired 550 MMBtu/hr Duct Burner and a Heat Recovery Steam Generator. The Heat Recovery Steam Generators supply steam to single steam turbine.
It should be noted that the compliance certification report shall cover each calendar year in which year the unit is subject to an Acid Rain limitation.

4) Phase II Permit Application: Attached.

5) Summary of Previous Actions and Current Action:

	Action	Date
1.	Draft permit prepared and submitted for public review and comment.	May 24, 2000
2.	Permit finalized and issued.	June 29, 2000
3.	Draft permit to align effective dates with Title V Operating Permit prepared and submitted for public review and comment.	March 25, 2006
4.	Permit finalized and reissued.	May 18, 2006
5.	Draft permit prepared and submitted for public review and comment.	April 30, 2011
6.	Permit finalized and reissued.	June 15, 2011
7.	Draft permit prepared and submitted for public review and comment.	April 16, 2016
8.	Permit finalized and reissued.	June 1, 2016
9.	Draft permit prepared and submitted for public review and comment.	DRAFT
10.	Permit finalized and issued.	DRAFT

Ronald W. Gore, Chief
Air Division

Date